Idaho Currents

Momentum builds for Energy Star Homes Northwest

Builders find program offers marketing niche in sea of competition.

Slightly more than a year after the Energy Star® Homes Northwest program began, about 215 builders have signed onto the new home construction program.

For many the program is a way to distinguish them in a highly competitive business. Through July of this year 485 homes have been certified as Energy Star Northwest homes.

Builder Walt Holton in Nampa built 85 certified Energy Star homes last year and has been with the program since day one.

"Homebuilding has not been a high margin business. It's not taken a zillionaire to become one, so everyone does it," he explained. "We had to separate ourselves as professional."

When looking at the housing boom predicted for the Northwest, the energy saving potential of building to the Energy Star standards is striking. According to the Northwest Energy Efficiency Alliance research, up to 65,000 new homes were built in the region in 2003. That number will soar to 120,000 a year by 2025.

The program's goal is to have 20 percent of new homes certified as Energy Star within five years. By the end of 2010 that would represent about 1.2 million kilowatt-hours (kWh) of electricity saved – enough energy to power about 10,000 Northwest homes for a year at a cost of less than a penny per kilowatt-hour.

Energy Star qualified homes in the Northwest are estimated to save between 1,000 and 1,500 kWh per year if heated with natural gas and up to 3,700 kWh per year if electrically heated.

Some 200 Idaho homes have been constructed under the Energy Star Homes Northwest program in the past 18 months. The program continues to gain momentum with homebuilders and buyers. *(Photo by Diane Holt)*

Main components of the program

Energy Star Homes Northwest specifications were designed so that the homes deliver an efficiency performance at least 15 percent better than codes in the region. The program includes efficiency improvements in all major end uses in a home, such as heating, cooling, water heating and lighting. Builders can follow one of two builder option packages – a gas/heat pump option or an electric zonal/propane option.

"We've also provided builders 11 technical options for flexibility," said Anne Brink, Alliance project manager for the program.

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"We know there are other ways of building and we want to allow for that." She points to hydronic heating as an example of the flexible options.

Utilities participate in a variety of ways. To date 21 utilities are offering various financial incentives to builders who participate in the program. For instance, Kootenai Electric Cooperative in Hayden offers $1,300 to builders who build an Energy Star Northwest home with a heat pump installed. Other utilities offer builders incentives to install Energy Star appliances.

Ninety-eight percent of the incentives offered go to homebuilders, said Dana Banks, senior program manager with PECI in Portland. Utilities participate in other ways as well.

"Benton and Franklin Public Utility Districts have chosen to co-sponsor builder breakfast events to educate bilders on the efficiency improvements of qualified homes," Brink said.

Other opportunities exist too, according to Banks, such as helping get the HVAC (heating, ventilation, and air conditioning) performance testing network up and running. "A utility could sponsor the training or subsidize the purchase of equipment. That's the nice thing about this program. If you don't have funding for an incentive, there are other opportunities to support it," she said.

The Energy Star Homes Northwest program qualifies for the Bonneville Power Administration's (BPA) conservation augmentation and conservation and renewable discount programs offered to BPA's utility customers. "That's another way utilities can recoup their investment," Banks added.

Builders benefit beyond incentives

"I believe the Energy Star specifications make selling the home easier," Holton said. "If you want to stay in it (business) for the long haul and want the reputation of building truly quality homes, then that would be a reason to go Energy Star."

A survey conducted in March 2005, by the Alliance found 56 percent of builders were aware of the Energy Star label and said the primary benefit of the program for them is "the potential advantage it may offer in terms of marketing and gaining a competitive edge."

Holton also has seen an increase in customer satisfaction with Energy Star construction. "Our warranty department has noticed the difference," he said. "Complaints about rooms being too hot or too cold have gone away along with complaints about higher heating bills."

Homeowners savvy to energy efficiency

The Alliance found that consumers and builders both link the Energy Star label to higher quality and value. "While only 19 percent of homebuyers report awareness of the Energy Star label for homes, 79 percent of those homebuyers agreed that Energy Star homes provide additional quality and 77 percent agreed that Energy Star homes are worth more," according to the survey.

"We're seeing people are more aware of energy costs and energy saving practices," according to Erin Fowler of Quadrant Homes in Bellevue, Washington. "But they dn't want to spend the money until we can show them tey'll make the money back. It comes down to trade offs," she said.

Quadrant tells potential buyers they can expect about 15 percent energy savings. Building to Energy Star Homes Northwest standards does require a commitment on the part of the builder.

"They have to pay more attention to different components and make sure subcontractors are trained," Banks said. "But once they understand the building science principles, they see it's a better home. And all builders want to build a better home."

Holton added, "You can preach from the mountain tops how good you are, but because the word 'quality' doesn't mean anything anymore, anyone can say that. This is an opportunity to prove it."

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New Building Program Takes Off In Idaho

By Ken Eklund, Principal Energy Specialist

In Idaho the Energy Star Northwest Program operated by the Energy Division is per capita the region's most successful. In 18 months of operation, the Energy Division has certified 200 homes to the Northwest Builder Option Package and has almost 300 homes in the pipeline.

Doug Plourde manages Idaho's program. According to him the key to Idaho's success is "working with builders, utilities and code officials, and providing follow-up. That, coupled with maintaining the integrity of the standards, has given Idaho's program real credibility with home buyers and builders."

Idaho's program requires whole house tightness testing with blower doors, duct tightness testing and combustion safety testing. These tests are performed by Home Performance Specialists who are trained by the Energy Division to national standards. All have passed a rigorous national exam.

Idaho savings are higher than for Oregon and Washington E Star homes for several reasons: 1) the Energy Division promotes extra features such as advanced framing; 2) the comparison standard is lower – codes in Oregon and Washington are more efficient than those enforced in most of Idaho; 3) Idaho has a lot of natural gas savings; and 4) Idaho has a colder heating climate and a hotter cooling climate than most of the region.

Typically the savings are in the neighborhood of 30-50 percent in Southwest Idaho. For example, a typical 2,200 square foot Energy Star home in Boise will use 260 to 300 therms of natural gas for heating and 2,000 kilowatt hours for cooling.

By comparison, a typical new home of the same size would use 600 to 700 therms of natural gas for heating per year and 4,000 to 5,000 kWh for cooling. Savings for this size home in this location would be $500 to $600 per year. Plus it would be quieter and more comfortable.

High Heat Bills?

It Could Be Your Ducts!

A duct system that is well designed and properly sealed can make your home more comfortable, more energy efficient, and safer. Why are duct improvements in your home a wise investment?

Comfort – Sealing and insulating ducts can help with common comfort problems, such as rooms that are too hot in the summer or too cold in the winter.

Health – Sealing ducts can help improve indoor air quality by reducing the risks of pollutants entering ducts and circulating through your home. Fumes from household and garden chemicals, insulation particles, and dust can enter your duct system through leaks and can aggravate existing asthma and allergy problems.

In addition, pressure from leaky supply ducts in your crawl space can force dust, insulation and other particles into the heating area.

Safety – During normal operation, gas appliances such as water heaters, clothes dryers and furnaces release combustion gases like carbon monoxide through their exhaust systems. Leaking ductwork or imbalances in your heating and cooling system may cause "backdrafting," where these gases are drawn into the living space, rather than expelled to the outdoors. Sealing leaks can minimize this risk.

Save Money – Leaky ducts can reduce heating and cooling system efficiency by as much as 20 percent. Duct sealing and insulating increases efficiency, lowers your energy bills, and can often pay for itself in energy savings.

Plus, if you're planning to install new heating and cooling equipment, a well designed and sealed duct system may allow you to downsize to a smaller, less costly heating and cooling system.

Protect the Environment – Energy generation is one of the largest contributors to greenhouse gases. By sealing your ducts and reducing the amount of energy necessary to comfortably heat or cool your home, you can reduce the amount of air pollution generated.

LOW-COST, NO-COST ENERGY CONSERVATION TIPS

The Energy Division wants to help consumers keep their energy use to a minimum. Often a substantial portion of our energy use is wasted. By using a few inexpensive energy-efficient measures, you can reduce your energy bills by 10-15 percent.

Room temperature – Setting the temperature lower just a few degrees can significantly reduce heating costs.

- Close your blinds and drapes at night in the winter to keep the cold out.
- Keep warm air registers clean and free of obstructions, such as furniture, carpets, and drapes.
- If you have reversible ceiling fans, set them in the winter to circulate the heated air collecting at the ceiling down towards the floor.

Weatherization – Warm air leaking out of your home during the winter can waste a substantial portion of your energy dollars.

- You can save 10% or more on your energy bill by reducing the air leaks in your home.
- Sealing ducts with mastic is often the most cost-effective measure than can be done to a home.
- Caulk, seal, and weatherstrip all seams, cracks and openings to the outside.
- Install rubber gaskets behind outlet and switch plates on exterior walls.
- Check insulation in the attic – there should be at least 13 inches.

Thermostat – When shopping for a programmable thermostat, look for the Energy Star® label.

- When using a heat pump, an anticipating heat recovery feature is recommended to reduce use of expensive backup heat.
- Use the “Hold” or “Vacation” feature only when your home will be unoccupied for a full 24 hours or longer.
- Remove the “Hold” feature when you return home.

Lights – Leaving an incandescent or fluorescent lamp on uses more energy than turning it on and off as needed.

- Get into the habit of turning off lights when you leave the room.
- Use natural day lighting when possible.
- Use compact fluorescent lights (CFL) instead of incandescent bulbs whenever you can. CFLs are 3-4 times more efficient than incandescents and last up to 10 times longer.
- A 22-watt CFL has about the same light output as a 100-watt incandescent.
- CFLs use 50-80 percent less energy than incandescents.

Electronics – Turn off the electric loads when not in use. Some equipment, including televisions and sound systems, always use energy to stay warmed up.

- Plug these appliances into a switched power supply and turn them off at the supply when not is use.
- Turn your computer off at night, on weekends and when it’s not in use for several hours during the day, even though it may have an energy saving “sleep” feature.
- Set your computer so the monitor goes into power saving mode instead of flashing a screen saver, or turn off the monitor.

Water heaters – It’s not necessary to have the thermostat higher than 120° F.

- Hotter water uses more energy to heat and causes you to use more cold water for bathing.
- Insulate your hot water storage tank, but be careful not to cover the thermostat.
- If your water is heated with gas, be careful not to cover the top and bottom of the tank.
- If buying a new water heater, select one that’s sufficient for your needs.
- A high density foam pad (extruded polystyrene) or insulated stand should be placed under an electric water heater that’s installed on a concrete floor.

To learn more about energy conservation,
call the Idaho Energy Hotline, **1-800-334-SAVE**, and ask for a free
copy of “Energy Savers: Tips on Saving Energy & Money at Home.”